United States Department of Agriculture

Soil Conservation Service

In cooperation with Illinois Agricultural Experiment Station

Soil Survey of Madison County, Illinois

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
								K	T		
	In	Pct	g/cc	In/hr	In/in	pH					Pct
592A----------	0-11	35-60	1.20-1.40	<0.06	0.12-0.21	6.1-7.3	High---------	0.28	5	4	2-4
Nameoki	11-32	35-60	1.30-1.50	<0.06	0.11-0.18	5.1-7.3	High---------	0.28			
	32-54	15-35	1.45-1.70	0.6-2.0	0.12-0.20	5.1-7.8	Low----------	0.28			
	54-60	5-30	1.50-1.80	0.6-2.0	0.05-0.20	5.6-7.8	Low----------	0.28			
620B2----------	0-6	10-27	1.30-1.50	0.06-0.2	0.22-0.24	5.1-7.3	Low----------	0.43	3	6	.5-2
Darmstadt	6-49	27-35	1.40-1.65	<0.06	0.09-0.10	4.5-7.8	Moderate-----	0.43			
	49-60	15-25	1.50-1.70	<0.06	0.10-0.15	7.4-9.0	Low----------	0.43			
620C3----------	0-10	27-35	1.35-1.55	0.06-0.2	0.12-0.17	4.5-7.3	Moderate-----	0.43	2	7	.5-1
Darmstadt	10-29	27-35	1.40-1.65	<0.06	0.09-0.10	4.5-7.8	Moderate-----	0.43			
	29-60	15-25	1.50-1.70	<0.06	0.10-0.15	7.4-9.0	Low----------	0.43			
741B, 741C-------	0-11	0-10	1.30-1.55	6.0-20	0.07-0.09	5.6-7.3	Low----------	0.15	5	1	.5-1
Oakville	11-60	0-10	1.30-1.65	6.0-20	0.06-0.10	5.6-7.3	Low----------	0.15			
801B*, 801E*, 802B*, 802E*. Orthents											
864*, 865*. Pits											
867*. Oil-waste land											
914C3*, 914D3*:											
Atlas----------	0-6	30-40	1.45-1.65	0.06-0.2	0.18-0.20	4.5-7.3	High---------	0.32	2	7	.5-2
	6-38	35-45	1.50-1.70	<0.06	0.09-0.13	4.5-7.3	High---------	0.32			
	38-60	20-30	1.55-1.75	0.06-0.2	0.12-0.15	6.1-7.8	Moderate-----	0.32			
Grantfork-------	0-5	20-30	1.35-1.55	0.2-0.6	0.15-0.20	4.5-7.8	Low----------	0.37	4	7	.5-1
	5-37	20-30	1.40-1.60	0.2-0.6	0.15-0.20	5.1-9.0	Low----------	0.37			
	37-60	20-30	1.65-1.80	0.06-0.2	0.07-0.10	7.4-9.0	Moderate-----	0.37			
916B*:											
Darmstadt-------	0-9	10-27	1.30-1.50	0.06-0.2	0.22-0.24	5.1-7.3	Low----------	0.43	3	6	.5-2
	9-49	27-35	1.40-1.65	<0.06	0.09-0.10	4.5-7.8	Moderate-----	0.43			
	49-60	15-25	1.50-1.70	<0.06	0.10-0.15	7.4-9.0	Low----------	0.43			
Oconee----------	0-9	20-27	1.20-1.30	0.2-0.6	0.22-0.24	5.6-7.8	Moderate-----	0.32	3-2	6	2-3
	9-14	18-27	1.30-1.45	0.06-0.2	0.20-0.22	4.5-7.3	Moderate-----	0.43			
	14-47	35-42	1.30-1.50	0.06-0.2	0.11-0.17	4.5-6.0	High---------	0.43			
	47-60	20-35	1.40-1.60	0.06-0.2	0.16-0.21	5.1-6.5	Moderate-----	0.43			
920*:											
Rushville-------	0-8	15-27	1.25-1.45	0.2-0.6	0.22-0.24	4.5-7.3	Low----------	0.43	3	6	1-3
	8-19	10-22	1.30-1.50	0.06-0.2	0.15-0.20	4.5-6.5	Low----------	0.43			
	19-60	35-45	1.40-1.60	<0.2	0.11-0.20	4.5-7.8	High---------	0.43			
Huey----------	0-9	15-27	1.35-1.50	0.2-0.6	0.22-0.24	5.1-7.8	Low----------	0.43	2	6	1-3
	9-14	11-25	1.40-1.55	0.06-0.2	0.20-0.22	5.1-7.8	Low----------	0.43			
	14-19	20-35	1.40-1.60	0.06-0.2	0.10-0.18	5.6-8.4	Moderate-----	0.43			
	19-44	25-35	1.45-1.65	<0.06	0.05-0.08	7.4-9.0	Moderate-----	0.43			
	44-60	18-35	1.55-1.75	0.06-0.2	0.10-0.15	6.6-8.4	Moderate-----	0.43			
936F*:											
Fayette---------	0-10	15-25	1.30-1.35	0.6-2.0	0.20-0.22	5.1-7.3	Low----------	0.37	5	6	1-2
	10-60	25-35	1.30-1.45	0.6-2.0	0.18-0.20	4.5-6.0	Moderate-----	0.37			

See footnote at end of table.

bottom land. Levees generally protect the bottom land against overflow from the Mississippi River. The soils formed in material altered by extensive cutting and filling. Individual areas are irregular in shape and range from 20 to 60 acres in size. Slopes range from 5 to 35 percent.

Typically, the soil material is brown and yellowish brown, friable silt loam and silty clay loam to a depth of 60 inches. Individual soil horizons are no longer distinguishable. In some areas the soil material is loam or clay loam.

Included with these soils in mapping are small areas between highway cloverleaf ramps. These areas are less sloping than the Orthents and are moderately well drained to somewhat poorly drained. They make up 5 to 10 percent of the unit.

Air and water movement through these soils varies, depending on the degree of compaction by construction equipment. Surface runoff is rapid. Available water capacity is high. Organic matter content is low.

Most areas are used as highway cloverleaf embankments. A few are used as small levees. Erosion is a hazard on these soils. It can be controlled by planting adapted varieties of densely growing perennials, such as crownvetch and tall fescue.

This map unit is not assigned to a land capability classification.

802B—Orthents, loamy, undulating. These nearly level to gently sloping, moderately well drained soils typically are on bottom land, but in some areas they are on uplands. Levees generally protect the bottom land against overflow from the Mississippi River. The soils formed in material altered by extensive cutting and filling. Individual areas are rectangular and range from 5 to 160 acres in size. Slopes range from 0 to 5 percent.

Typically, the soil material is brown and yellowish brown, friable loam and clay loam to a depth of 60 inches. Individual soil horizons are no longer distinguishable. In some areas the soil material is silt loam or silty clay loam. In other areas a seasonal high water table is within 4 feet of the surface.

Included with these soils in mapping are small manmade lakes that formerly were borrow areas. These areas make up 5 to 10 percent of the unit.

Air and water movement through these soils varies, depending on the degree of compaction by construction equipment. Surface runoff is medium. A seasonal high water table is 4 to 6 feet below the surface during the period April through June in most years. Available water capacity is high. Organic matter content is low.

Most areas are used for industrial development. Onsite inspection is needed to determine the limitations or hazards affecting the construction of buildings. Applying fertilizer and mulching help to establish plants.

This map unit is not assigned to a land capability classification.

802E—Orthents, loamy, steep. These moderately sloping to steep, well drained soils typically are on bottom land, but in some areas they are on uplands. Levees generally protect the bottom land against overflow from the Mississippi River. The soils formed in material altered by extensive cutting and filling. Individual areas are rectangular or irregular in shape and range from 20 to 200 acres in size. Slopes range from 5 to 35 percent.

Typically, the soil material is brown and yellowish brown, friable loam and clay loam to a depth of 60 inches. Individual soil horizons are no longer distinguishable. In some areas the soil material is silt loam or silty clay loam.

Included with these soils in mapping are small areas between highway cloverleaf ramps. These areas are less sloping than the Orthents and are moderately well drained to somewhat poorly drained. They make up 5 to 10 percent of the unit.

Air and water movement through these soils varies, depending on the degree of compaction by construction equipment. Surface runoff is rapid. Available water capacity is high. Organic matter content is low.

Most areas are used as levees or highway cloverleaf embankments. Erosion is a hazard on these soils. It can be controlled by planting adapted varieties of densely growing perennials, such as crownvetch and tall fescue.

This map unit is not assigned to a land capability classification.

864—Pits, quarries. This map unit consists of excavations from which limestone has been removed. The bottom of the quarries generally is nearly level and gently sloping, the sides are nearly vertical. Individual areas are mainly rectangular and range from 25 to 95 acres in size.

The bottom and sidewalls are mainly exposed limestone bedrock. Strips of soil material are generally along the tops of the sidewalls, and a talus slope is along the bottom in places.

Included with this unit in mapping are roads used for hauling the quarried material, stockpiles of crushed limestone, and some areas covered with machinery and debris. Included areas make up 10 to 15 percent of the unit.

Runoff is medium in most areas but is ponded in depressional areas. All areas, except for the bands of soil material along the tops of the sidewalls support little or no vegetation.

This map unit is actively mined for limestone. It is poorly suited to most other uses. Some areas are suitable for paths and trails. Some depressional areas are suitable as pond reservoirs. Falling rock is a hazard.

This map unit is not assigned to a land capability classification.


Newport
GRANITE CITY
MADISON
SITE
(Joins sheet 104)
1 Mile
5,000 Feet